From: DeMaria, Eva
To: "LACEY David"

Cc: <u>Michael Allen (allenmc@cdmsmith.com)</u>

Subject: EPA clarification - Rhone-Poulenc GW Monitoring Modifications

Date: Wednesday, October 12, 2016 10:37:00 AM

Hi Dave-

Here's our response.

The frequency of data collections depends upon the objectives for use of the data and the hydrogeology. Shallow/alluvial wells for performance monitoring would be best candidates for quarterly data collection. Deep wells at margins of a plume, semi-annual would be appropriate (2x per year).

#1 – Consider this as a primary comment. Assuming the goal is to obtain chemical data representative of current groundwater conditions, both for a well and for the "plume," a minimum of 4 data points (samples) is recommended for evaluation of current conditions. A key point of our concern with the past data is the temporal and spatial deficiencies. Regardless if a well was sampled 2 to 10 times, the existing dataset spans many years (older than 2010) and the time periods are vary for a single well and amongst a group of wells. Consequently, comparing the data points, mapping, or other evaluations, results in significant uncertainty. Quarterly data collection implies regular intervals consistently measured. One objective of the frequency is to capture (identify) potential cyclical patterns or other environmental effects to chemicals concentrations and water levels. The goal is to represent the variance and better represent the mean concentrations. Data collected semi-annually (twice per year) extends the time to collect minimum dataset, and prolong the time for a meaningful evaluation.

#2 is correct, confirmed.

Please feel free to call or email with questions. Thanks.

Eva

From: LACEY David [mailto:david.j.lacey@state.or.us]

Sent: Tuesday, October 11, 2016 4:11 PM **To:** DeMaria, Eva < <u>DeMaria.Eva@epa.gov</u>>

Cc: MCCLINCY Matt < <u>matt.mcclincy@state.or.us</u>>

Subject: RE: EPA comments - Rhone-Poulenc GW Monitoring Modifications

Eva,

Thanks for getting the comments to me so fast. I have two questions that I want to talk with you about before I send my final comments to Rhone-Poulenc.

1. Is the request for quarterly monitoring a "primary" or "to be considered". We discussed that EPA generally defaults to quarterly monitoring in order to evaluate seasonal fluctuations. However the majority of these wells have already be sampled anywhere from two to ten

- times all ready and the for non-water table wells, seasonal fluctuations are not anticipated. I am assuming that annual or semi-annual sampling will be sufficient for most of these wells. Could you confirm this for me.
- 2. Attachment 2 includes a list of monitoring wells that should be included as performance monitoring wells to evaluate baseline conditions, plume attainment, and effectiveness of the remedy to address contaminants in the deeper groundwater on the Siltronics and Northwest Natural properties. I assume that EPA is excepting that this list will be finalized as part of a performance monitoring plan to be developed as part of the Proposed Plan. Can you confirm this for me.

When would be a good time for a phone call? Dave

From: DeMaria, Eva [mailto:DeMaria.Eva@epa.gov] Sent: Thursday, September 29, 2016 3:51 PM

To: LACEY David

Cc: 'AllenMC@cdmsmith.com'; MCCLINCY Matt

Subject: EPA comments - Rhone-Poulenc GW Monitoring Modifications

Here ya go. Thanks.

Eva

From: LACEY David [mailto:david.j.lacey@state.or.us]

Sent: Thursday, September 29, 2016 2:33 PM **To:** DeMaria, Eva < <u>DeMaria.Eva@epa.gov</u>>

Cc: 'AllenMC@cdmsmith.com' < <u>AllenMC@cdmsmith.com</u>> **Subject:** Rhone-Poulenc GW Monitoring Modifications

Eva,

Just checking in to see if you and CDM have been able to review the modifications we discussed in our phone call or if you have any questions that I could help with.

Thanks.

David Lacey

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